

U.S. Patent Application Serial No. 10/574,277
Amendment filed March 18, 2009
Reply to OA dated January 2, 2009

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-4: (Canceled)

Claim 5 (Currently Amended): A process for manufacturing a lithium tantalate substrate by using a lithium tantalate crystal grown by the Czochralski method, wherein; a lithium tantalate crystal grown by the Czochralski method and worked in the state of a substrate is buried in a mixed powder of 25% by weight of Al and 75 % by weight of Al_2O_3 , followed by heat treatment carried out at a temperature kept to from 350 to 600°C for 20 hours in an atmosphere of nitrogen gas and under reduced pressure, to manufacture a lithium tantalate substrate having volume resistivity which has been controlled within the range of from 10^{10} to 10^{13} Ωcm .

Claim 6: (Currently Amended): A process for manufacturing a lithium tantalate substrate by using a lithium tantalate crystal grown by the Czochralski method, wherein; a lithium tantalate crystal grown by the Czochralski method and worked in the state of a substrate is buried in a mixed powder of 10% by weight of Al and 90 % by weight of Al_2O_3 , followed by heat treatment carried out at a temperature kept to from 350 to 600°C for 20 hours in

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an atmosphere of nitrogen gas and under reduced pressure, to manufacture a lithium tantalate substrate having volume resistivity which has been controlled within the range of from 10^{10} to 10^{13} Ωcm .

Claim 7 (Currently Amended): A process for manufacturing a lithium tantalate substrate by using a lithium tantalate crystal grown by the Czochralski method, wherein;

a lithium tantalate crystal grown by the Czochralski method and worked in the state of a substrate is buried in a mixed powder of 50% by weight of Al and 50 % by weight of Al_2O_3 , followed by heat treatment carried out at a temperature kept to from 550°C for 40 hours in an atmosphere of nitrogen gas and under atmospheric pressure, to manufacture a lithium tantalate substrate having volume resistivity which has been controlled within the range of from 10^{10} to 10^{13} Ωcm .

Claim 8 (Currently Amended): A process for manufacturing a lithium tantalate substrate by using a lithium tantalate crystal grown by the Czochralski method, wherein;

a lithium tantalate crystal grown by the Czochralski method and worked in the state of a substrate is buried in a mixed powder of 25% by weight of Al and 75 % by weight of Al_2O_3 , followed by heat treatment carried out at a temperature kept to from 550°C for 10 hours in an atmosphere of vacuum, to manufacture a lithium tantalate substrate having volume resistivity which has been controlled within the range of from 10^{10} to 10^{13} Ωcm .